Title: Urban and Community Forestry Challenge - “Shade Index”

Office: U.S. Forest Service, State & Private Forestry, Urban & Community Forestry
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Description of the Challenge: Develop a web and phone app tool that assigns a "shade index" to neighborhoods.

The shade provided by the tree canopy in our neighborhoods: reduces energy used to heat and cool our buildings; protects us from overexposure to the sun and the health complications that can result, including skin cancer; and reduces urban heat island effect, protecting the most vulnerable parts of our population in times of intense heat. Using geospatial data such as the 2011 National Land Cover and census block group data sets, a team working on this challenge will develop a tool that assigns a "shade index" score to each census block group based on tree canopy. This score will be very similar to the "walkability score" currently used by realtors and real estate websites to attract buyers to a potential neighborhood.

Having such an index readily accessible to the general public will give us a common language for discussing the importance of tree canopy to quality of life and human health. Potential home buyers could compare shade index scores in selecting their new home, drawing attention to the role trees play in increasing home values and attracting increased public and private funding in maintaining the tree canopy in our neighborhoods. Additionally, policy makers could use the shade index to identify and address inequality in how and where we are investing in the maintenance and preservation of our tree canopy.

Hopeful Outcome:
Develop a prototype of a tool that allows users to quickly and easily access shade scores for any neighborhood in the United States. Ideally this tool would be available on the web and as a phone app.

The Forest Service can supply the relevant data layers.

Skills Needed:
Coding/development experience, Geospatial Information Services experience, graphic design and web development experience to design the user interface.

Data: http://catalog.data.gov/dataset/census-blkgrp10-9dd75